

# Welcome to the Gateway Cities AQAP

Environmental Committee  
September 28, 2011

DRAFT

The Gateway Cities  
**Air Quality Action Plan**

# Item VII A – The Gateway Cities AQAP Project Update

Environmental Committee  
September 28, 2011

# Project Update

- AQAP 101 Review
- Schedule, Overall Status
- Participation Framework Status and Reviews

# The AQAP was conceived in the I-710 EIR/EIS Process

## **I-710 EIR/EIS**

Environmental Impact Report/Study for the I-710 corridor improvement project

Is for I-710 Corridor **Only**

## **AQAP**

Develop a toolkit of AQ improvement strategies for the entire GCCOG

Is not a CEQA document

Is for the entire GCCOG

# I-710 EIR/EIS and AQAP Scope of Work Relationship

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## I-710 EIR/EIS

- **Technical Studies**
  - Noise
  - AQ/HRA
  - Comm. Impact Assessment
  - and many more

## Gateway Cities AQAP

- Emissions Inventory
- AQ/HRA
- Develop AQ Strategies
- Compendium Update
- CMNA
- I-710 HIA
- I-710 Construction Staging and Phasing
- I-710 Near Roadway Modeling (Ultrafines)

# I-710 EIR/EIS and AQAP Scope of Work Relationship

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- **Technical Studies**
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# I-710 EIR/EIS and AQAP Scope of Work Relationship

## I-710 EIR/EIS

- Technical Studies
  - Noise
  - AQ/HRA
  - Comm. Impact Assessment
  - and many more

## \*Gateway Cities AQAP

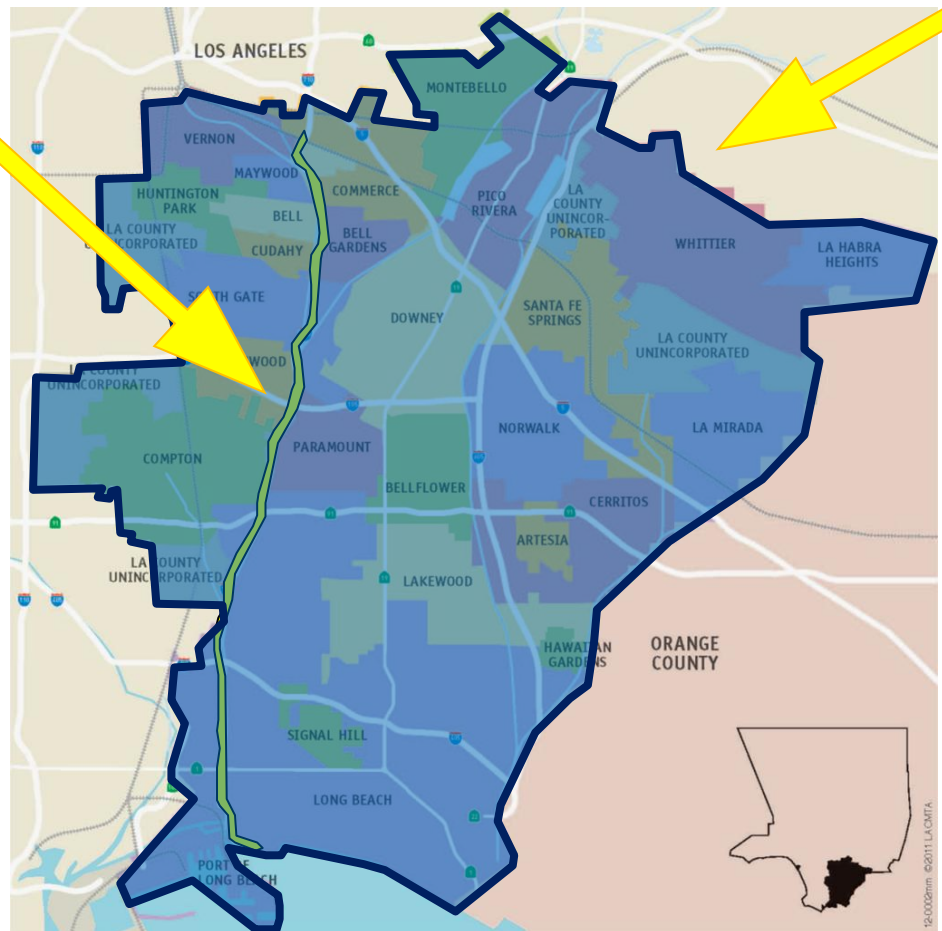
- Emissions Inventory
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\*The AQAP tasks indicated are scheduled to be completed by the end of November for consideration in the Draft I-710 EIR/EIS

# Project Study Areas

## I-710 Corridor

## Gateway Cities COG Subregion

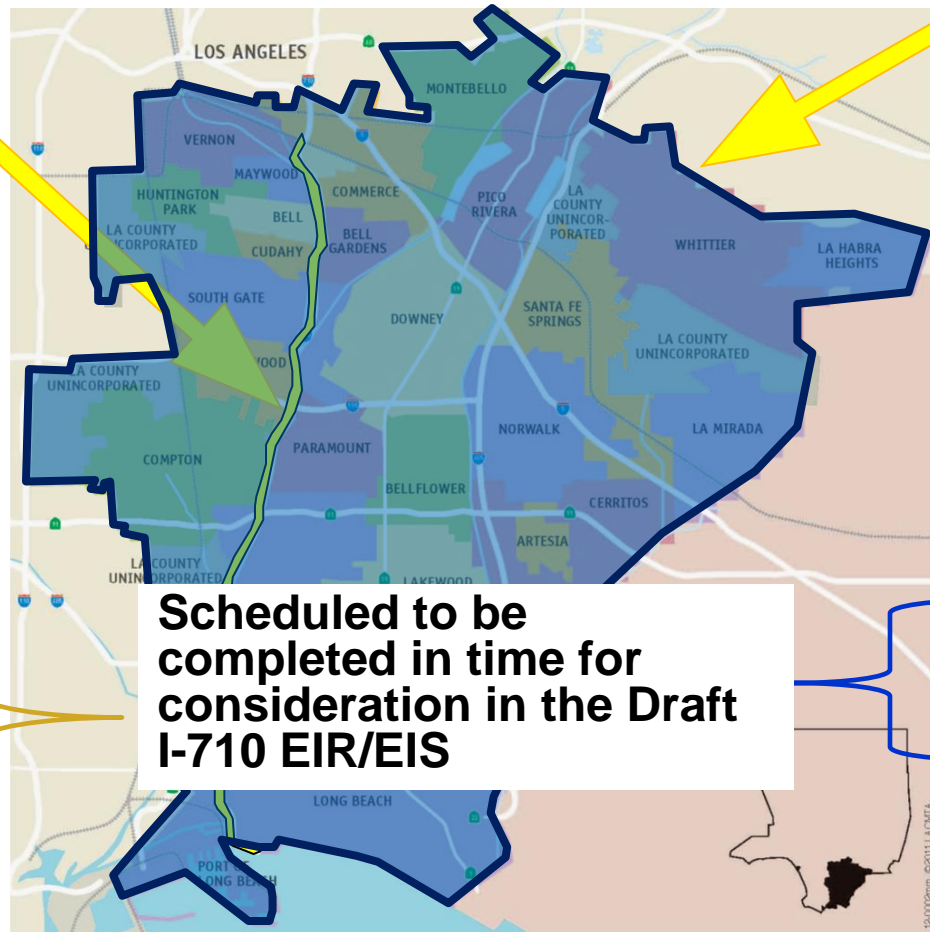


# Project Study Areas

## I-710 Corridor

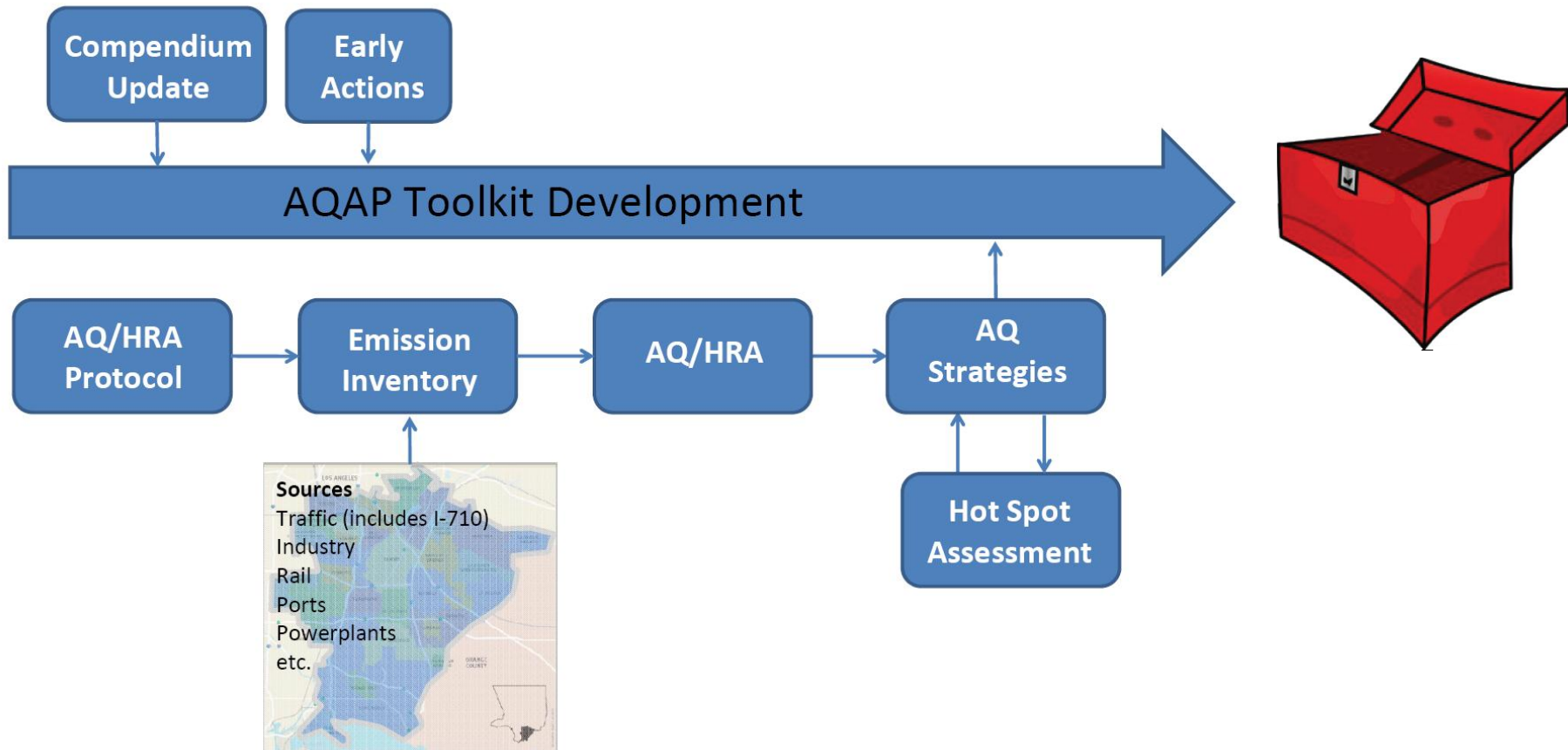
## Gateway Cities COG Subregion

- I-710 EIR/EIS
- Numerous Technical Studies (Noise, AQ/HRA)
- I-710 HIA
- I-710 Near Roadway Modeling (Ultrafines)
- I-710 Construction Staging and Phasing



- Emissions Inventory
- AQ/HRA
- New AQ Measures
- Compendium Update
- Community Medical Needs Assessment

# AQAP Toolkit Development Process



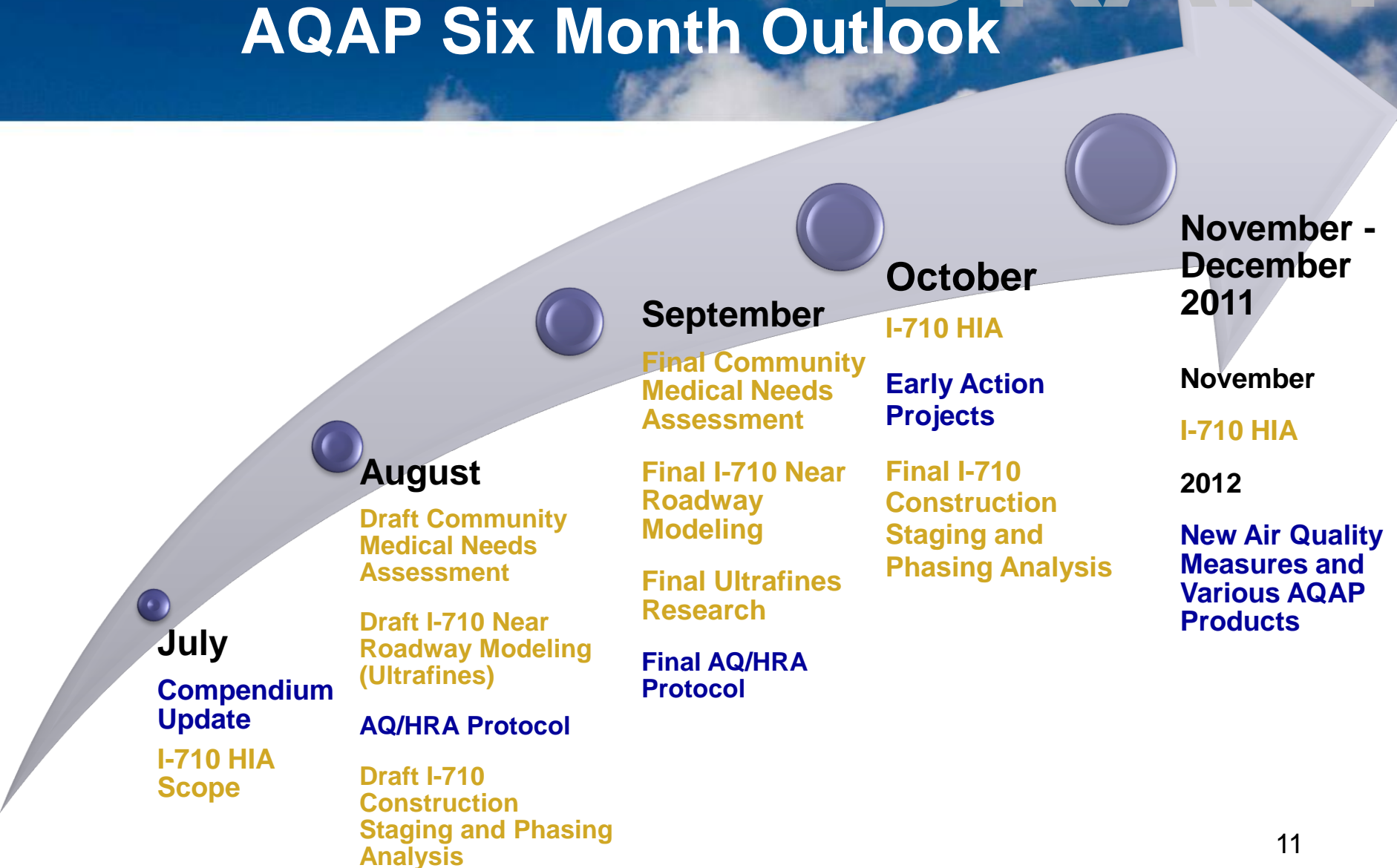
**Notes:**

CSP - I-710 Construction Staging and Phasing  
Ultra - Ultrafines Research

CMNA - Community Medical Needs Assessment  
HIA - Health Impact Assessment

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# AQAP Six Month Outlook



Note: Tasks shown in gold are scheduled to be completed in time for consideration in the I-710 EIR/EIS

Technical Tasks	Status
Comm. Medical Needs Assessment	Initial Findings
I-710 Near Roadway Modeling	Final Findings Update Today
I-710 Ultrafines	Final Findings Update Today
Air Quality Protocol	<b>Completed</b>
Compendium Update	<b>Completed</b>
Quantitative Air Quality Analysis	In Process
I-710 Construction Staging and Phasing Assessment	Initial Findings
The I-710 Health Impact Assessment	Update
Health Risk Assessment	In Process
Develop Air Quality Strategies	Task starts in 2012
Analysis of New Air Quality Measures	Task starts in 2012
Early Action Support	Update
Develop AQAP Report	Task start in April 2012
Public Outreach	In Process

**Develop Protocol**

**COG Staging and  
Phasing Plan**

**Prepare Emission  
Model**

**Develop Emission  
Inventory**

**Prepare Report**

**Framework  
Discussion**

## **Impacts from I-710 Construction Staging and Phasing**

- Modeling near complete
- Updating model with revised population data for construction equipment (age, hp, qty.) from CARB
- Discussed Key Findings at September Roundtables
- Initial Results today, then Trans. Comm. and GCCOG BOD in October

# Objectives

Estimate emissions for a reasonable foreseeable concept of construction staging and phasing of the I-710 corridor improvements

- Duration of Project (2018 – 2034) = 17 years
- Actual duration dependent on funding

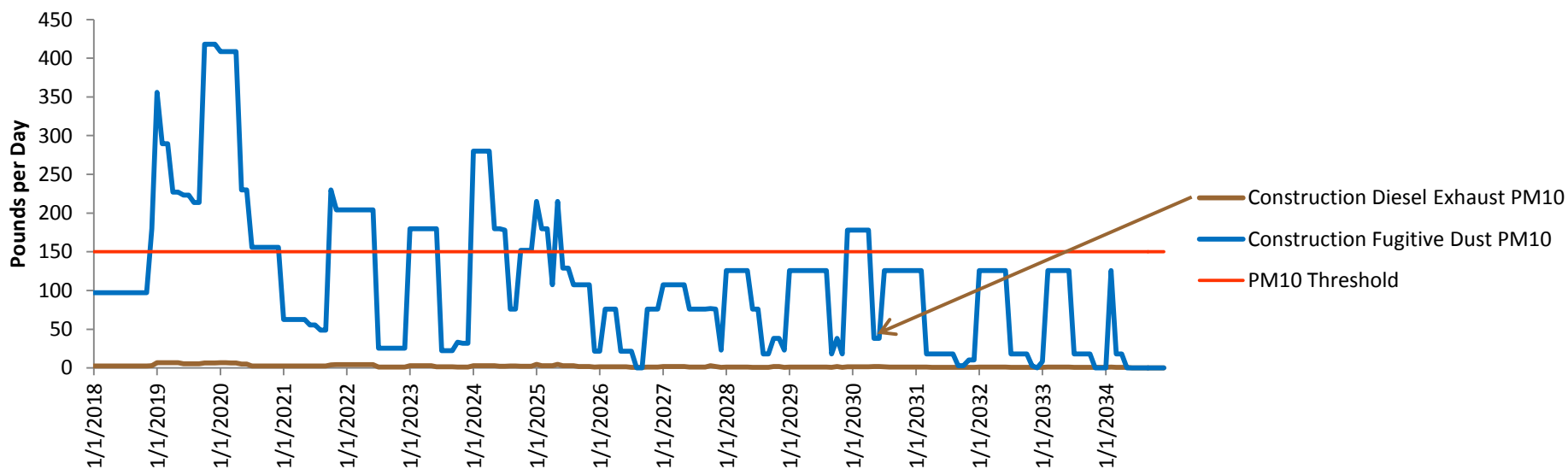
## Approach

1. Use construction data from GCCOG Construction Staging/Phasing concept report for each segment
  - a. Area disturbed, project length and/or area, project duration, soil hauling, acres disturbed per day,
  - b. Duration of each stage and phase within segment
2. Input construction data into the enhanced Roadway Construction Emissions Model
3. Output daily and monthly average and peak daily emissions on a month by month basis for each of seven construction segments

# Preliminary Findings

## Peak PM10 Emissions (lbs/day)

### Peak PM<sub>10</sub> Daily Emissions for Any One Segment



Most PM<sub>10</sub> generated from construction fugitive dust

## Preliminary Findings Continued

### NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>

- Only segments 3-7 show exceedance of regional significance threshold, but only 10-20% of the construction period
- Analysis is developed for each segment and changes at the local scale (geometry, interchanges) will not impact the emission findings

### Robust analysis is useful for air quality modeling

- Detailed info for specific times and locations for each pollutant of concern

## Next Steps

- Updating now with revised CARB OFFROAD model information (received August 2011)
  - Update primarily to equipment population and load factors
- Health risk of the toxics addressed in HRA

# AQAP Task Update

**Draft Scope**

**Framework  
Discussion**

**Data  
Assessment**

**Report  
Preparation**

**Framework  
Discussion**

## **I-710 Health Impact Assessment**

- Conducted 3<sup>rd</sup> HIA TWG
- Draft Scope Considered during July and August Roundtables, Updates to EC, Trans. Comm, and COG BOD
- Final Scope of Work Completed
- Draft Report under review
- Final findings presented to RTs, EC, TC and BOD in Oct/Nov

# AQAP Task Update

Review Early  
Action Items

Conduct  
Evaluation

★ Consult with  
Environmental  
Groups

Consult with Local  
Gov'ts

Determine Support  
Rqmt's

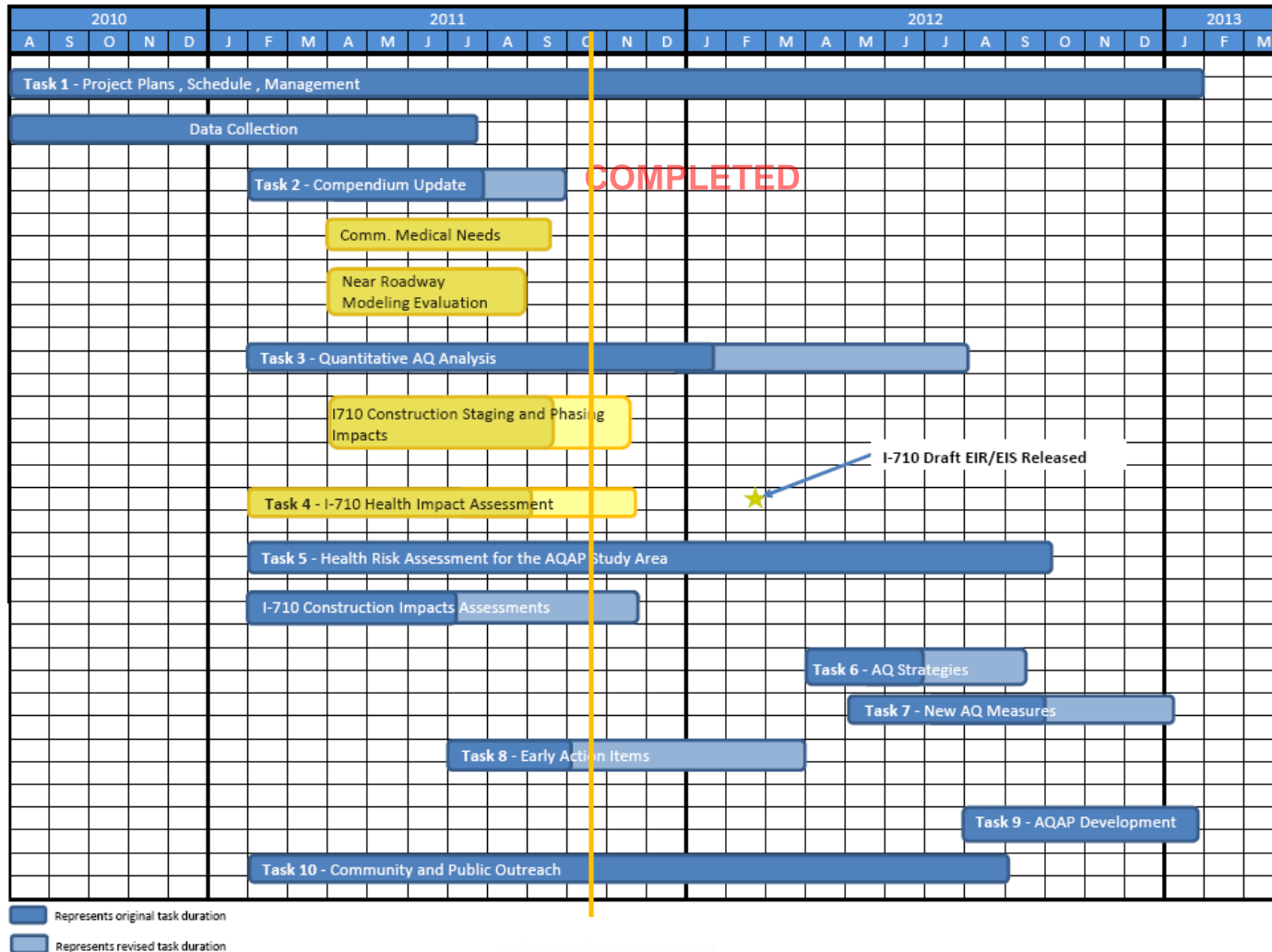
Develop Early  
Action Plan

Framework  
Discussion

## Early Action Items for Local Gov't

- Completed evaluation of status of Early Action Items
- Initiated Research on remaining Early Action Implementation.
- Conducted Workshop with PDs and PWs
- Initial Findings in January

# AQAP Project Overview Schedule



# AQAP Participation Framework Committees Update

# Participation Framework

## SEPTEMBER

Committee Update Format:

- Participants
- Topics
- Comments
- Responses

I-710 Project Team

GCCOG Board

Transportation Committee

October 5<sup>th</sup>

Environmental Committee

October 5<sup>th</sup>

AQAP Roundtables

September 28<sup>th</sup>

AQAP Technical Working Groups

September 14<sup>th</sup>/15<sup>th</sup>

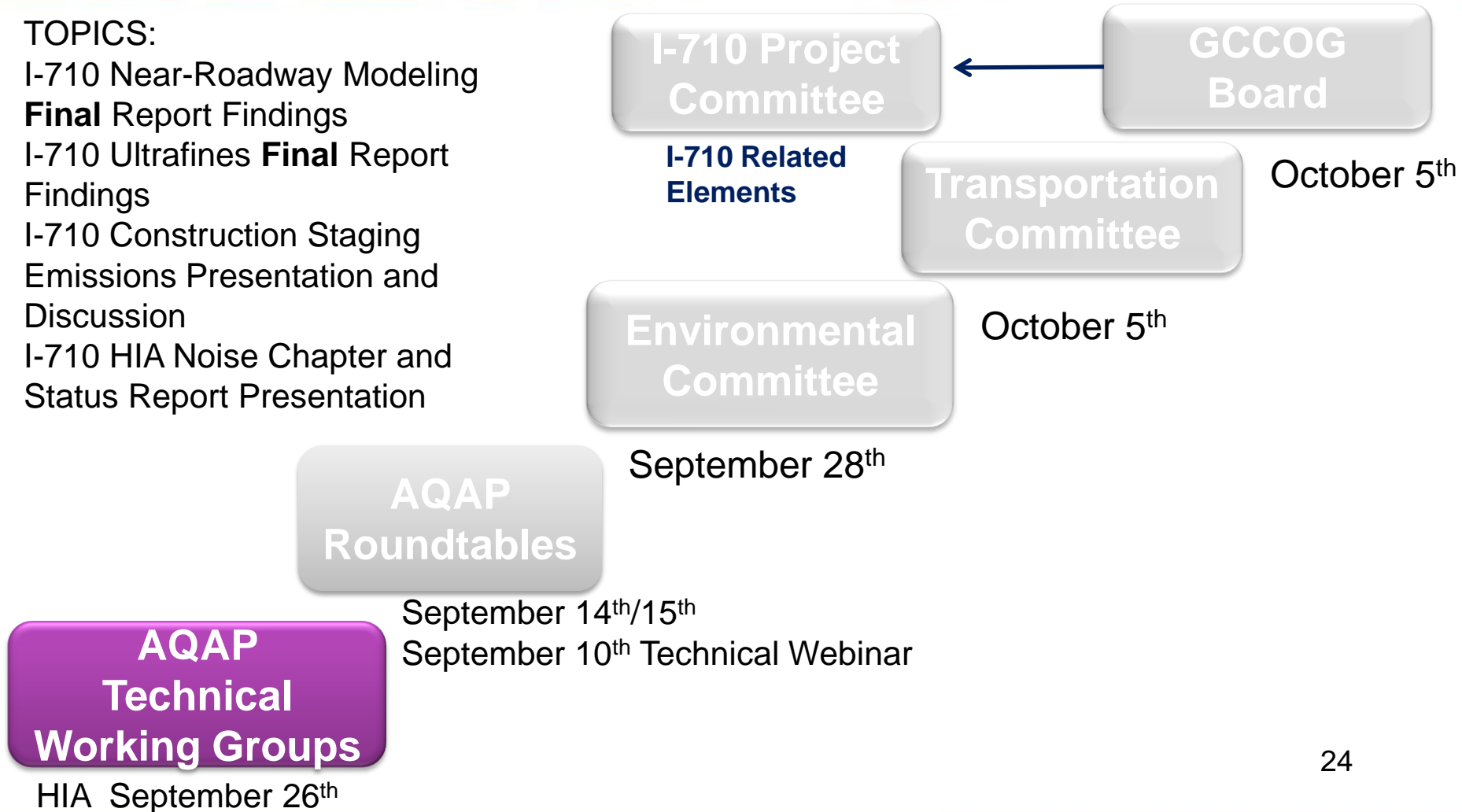
September 10<sup>th</sup> Technical Webinar

HIA September 26<sup>th</sup>

# Participation Framework

**TOPICS:**

- I-710 Near-Roadway Modeling **Final** Report Findings
- I-710 Ultrafines **Final** Report Findings
- I-710 Construction Staging Emissions Presentation and Discussion
- I-710 HIA Noise Chapter and Status Report Presentation



# AQAP Participation Framework

## I-710 HIA TWG Update

### Topics

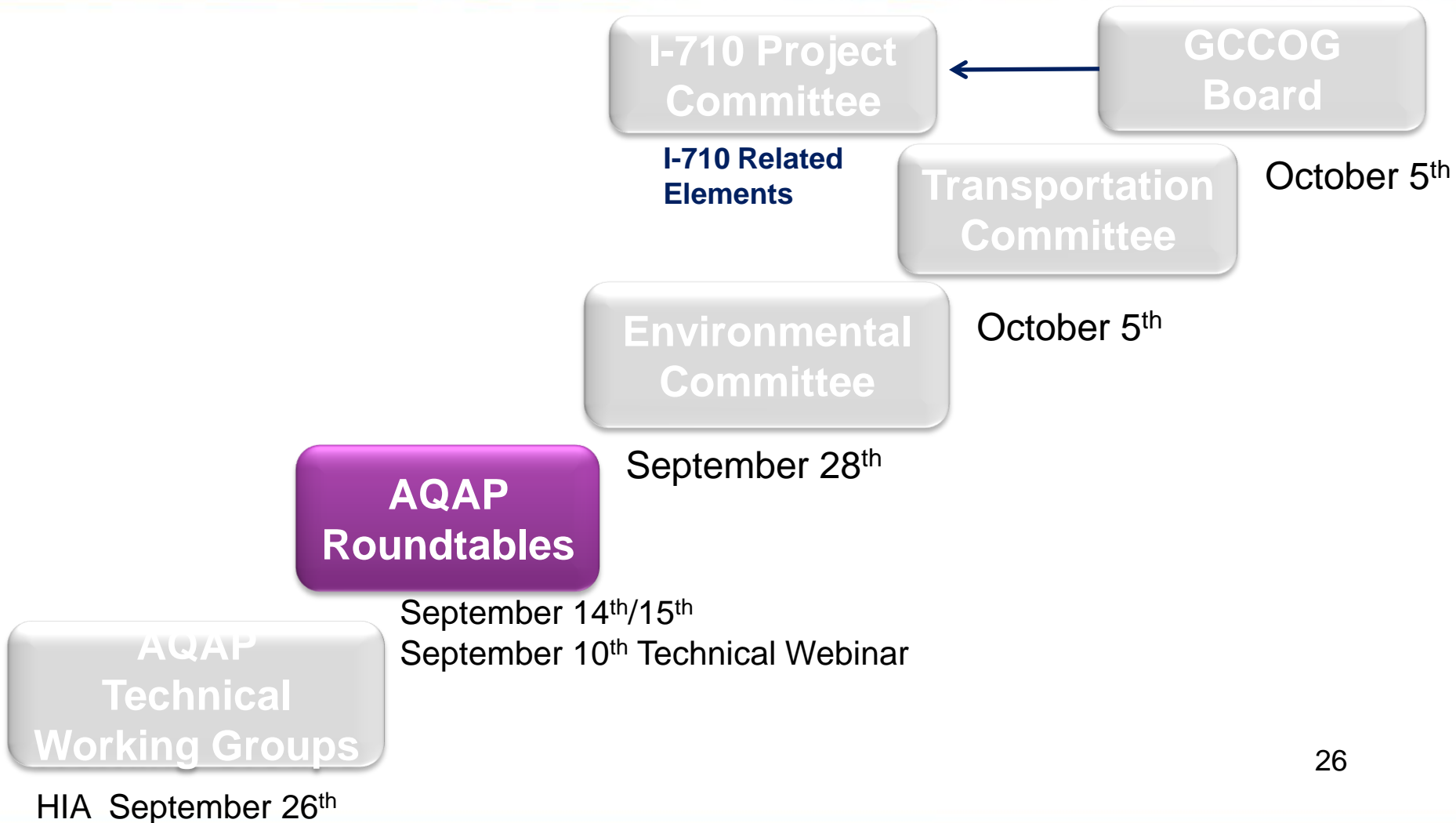
HIA Report: Overview and Draft Chapters:

- Mobility
- Air Quality,
- Traffic Safety
- Neighborhood Resources
- Jobs and Economic Development

### Meetings

May 12<sup>th</sup>, May 26<sup>th</sup>, July 11<sup>th</sup>, August 29<sup>th</sup>,  
September 26<sup>th</sup>, October 3<sup>rd</sup>

# Participation Framework



# AQAP Participation Framework TRT Update

## Topics

- AQAP Project Update
  - I-710 Near-Roadway Modeling **Final** Report Findings
  - I-710 Ultrafines **Final** Report Findings
  - I-710 Construction Staging Emissions Presentation and Discussion
  - I-710 HIA Noise Chapter and Status Report Presentation
- Roundtable Discussion
  - I-710 HIA – Noise Chapter

## Meetings

September 14<sup>th</sup> Meeting

# AQAP Participation Framework

## TRT Update

Comments  
Concerns

### I-710 Construction Phasing and Staging Emissions Report Findings:

**Comment:** Concrete may pile up at the work site; if the concrete is not covered, it could produce a significant amount of dust. Do projections of the PM 10 & 2.5 emissions include fugitive dust from construction debris?

**Response:** *Studies have shown fugitive dust can be reduced by 50% when watered every four (4) hours and up to 74% when watered every two (2) hours. Surfactants such as calcium chloride that when applied to fine dirt bonds with the soil and prevents it from becoming airborne when blown by the wind.*

# AQAP Participation Framework

## TRT Update

Comments  
Concerns

### I-710 Near-Roadway Monitored to Modeling Final Comparison Report Findings:

**Comment:** TRT Members were dismayed to learn that the final product that will be submitted to the I-710 EIR/EIS would be in the form of a PowerPoint.

**Response:** *The full detailed I-710 related reports will not be available until February 2012. The four technical tasks that will be submitted to Caltrans go above and beyond what is already included in the I-710 EIR/EIS.*

# AQAP Participation Framework

## TRT Update

Comments  
Concerns

### Ultrafine Particles Near Roadways, Final Report Findings:

**Comment:** TRT Members asked for more detail on the recommendation for local governments to restrict their transportation fleet.

**Response:** *Regulation could be in two parts: first, local agencies could restrict where and how much "dirty vehicles" can travel. While this is not a current power of local governments, it could be explored for the future. Second, municipalities and other agencies could adopt low emission vehicle standards for their own fleets.*

# AQAP Participation Framework TRT Update

Comments  
Concerns

## Noise Chapter Preliminary Recommendations:

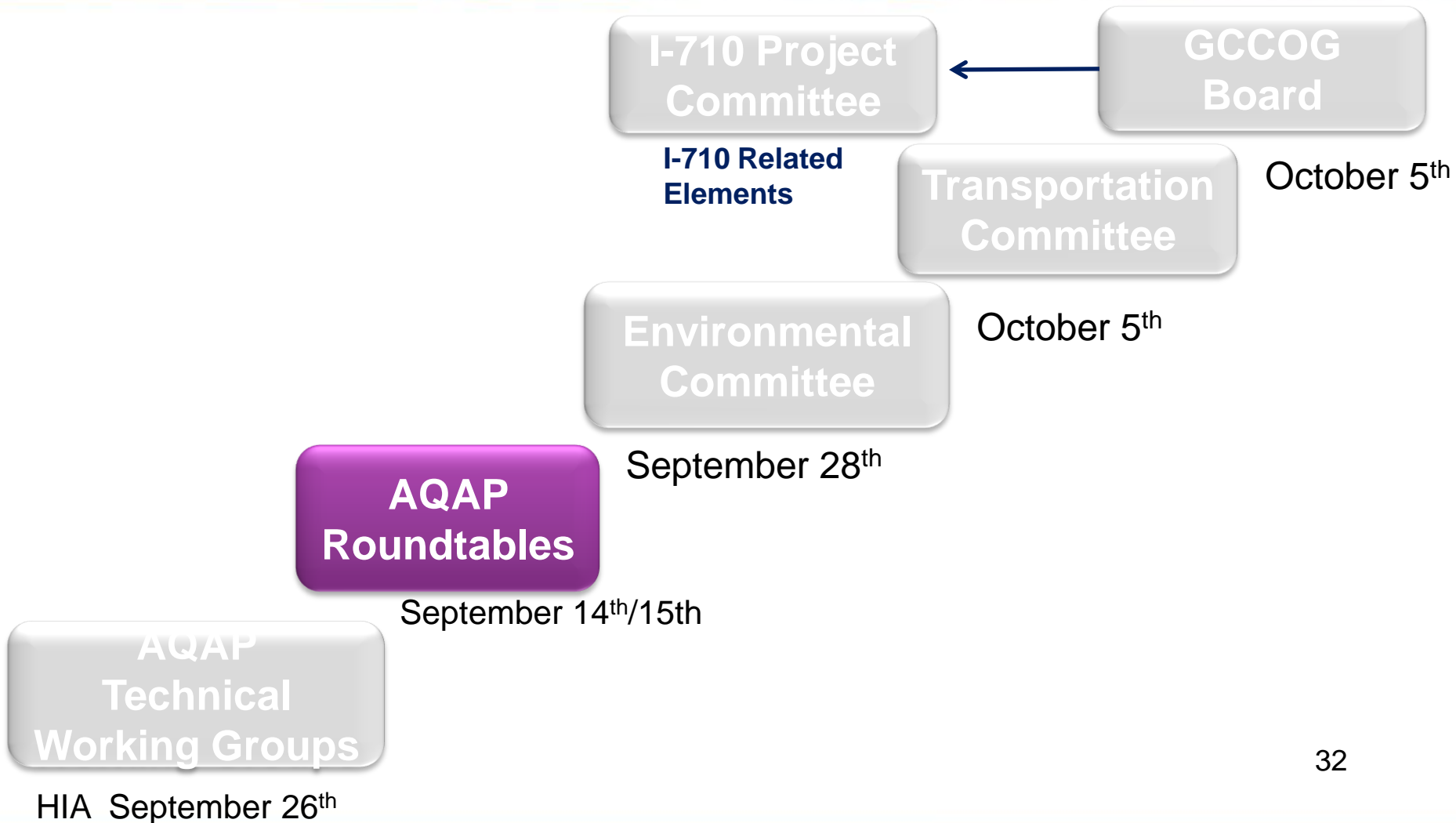
**Comment:** Use landscape and plant trees as a way to reduce noise

**Response:** *Trees must be dense and clustered together to have a noise dampening effect.*

**Clean Rail:** Delete the word "clean" from the phrase and replace it with "state-of-the-art".

**Response:** *The recommendation will be reworded accordingly.*

# Participation Framework



# AQAP Participation Framework ART Update

## Topics

- AQAP Project Update
  - I-710 Near-Roadway Modeling **Final** Report Findings
  - I-710 Ultrafines **Final** Report Findings
  - I-710 Construction Staging Emissions Presentation and Discussion
  - I-710 HIA Noise Chapter and Status Report Presentation
- Roundtable Discussion
  - I-710 HIA – Noise Chapter

## Meetings

- September 15<sup>th</sup> Meeting

# AQAP Participation Framework ART Update

Comments  
Concerns

## I-710 HIA Noise Chapter

**Comment:** How much of the I-710 freeway is flanked by soundwalls? Recommend placing a land use layer on the GIS map containing the Caltrans noise level measurements.

**Response:** *Metro is funding a study to see what areas are missing soundwalls and the feasibility of building them.*

**Comment:** Noise mitigation techniques as a proposed solution (slide 28).

**Response:** *Further research is needed.*

# AQAP Participation Framework ART Update

## Comments Concerns

**Comment:** Since mitigation measures are based on the numbers collected, we need to be very sure that they are accurate. Recommend additional sampling at sensitive receptor sites; the study should consult a sound engineer to determine how far out to collect data.

**Comment:** Importance of matching the sensitive receptor sites to the mitigation priorities. Example: Don't build a sound wall next to an industrial zone! Build it next to a residential area with a neighborhood school.

# AQAP Participation Framework ART Update

Comments  
Concerns

## Near-Roadway Monitored to Modeling Final Comparison Report Findings

**Comment:** Recommend a peer review of the methodology used to predict emissions because the projections will be considered by Caltrans as a basis for policy decision making.

**Response:** *Project Team will discuss this recommendation with Caltrans.*

# AQAP Participation Framework ART Update

Comments  
Concerns

## Ultrafine Particles Near Roadways:

**Comment:** What is the most effective way to reduce emissions?

**Response:** *Diesel particulate traps are the best technology for reducing the emission of ultrafine particles. When used in conjunction with oxidation techniques, they are even more effective.*

**Comment:** Does the danger of ultrafines comes from their small size or their chemical composition?

**Response:** *High surface area characteristic of ultrafine particles is also a source of toxicity.*

# Participation Framework



# AQAP Participation Framework Environmental Committee Update

Comments  
Concerns

**Comment:** Concerns expressed about fiscal impacts and the medical cost for each premature death.

***Motion Passed Unanimously:*** Project Team is to further study the fiscal impacts related to the health outcomes.

***Response:*** Mr. Wood indicated that the Project Team would conduct research on the matter and report back at the September meeting.

The Gateway Cities  
**Air Quality Action Plan**

Thank You

Questions or Comments